

large, very long, black spines on posterior border, which surpass apex of abdomen. Bristles on joint 2 of antennæ exceeding joint 3 in length. All tibiæ heavily armed on posterior margins with very numerous, long, stout, black spines. Tarsi slender: proportional lengths of tarsal joints as in *obtusiceps*. The posterior apical spines on hind tibiæ and first and second joints of hind tarsi are in each case longer than the succeeding joint.

Described from a single female received from Prof. F. L. Harvey and taken on *Erotomys* at Orono, Me. The specimen may not be quite mature.

I have seen a flea from *Haplodon* of remarkable structure and great size, which may have been an *Hystrihopsylla*. The single specimen which came into my hands was destroyed by an accident in the laboratory.

The occurrence of this peculiar genus in America is a matter of the greatest interest. The fact of its coming from an animal that has lived beside walks trodden by our entomologists for many years shows how the Siphonaptera have been neglected, and indicates the fertility of a field easily worked. An opportunity for a piece of splendid work is open to collectors of mammals and those interested in hunting. Such persons could easily do more than any others towards building up our knowledge of the Siphonaptera of America, and that by simply saving what actually passes through their hands. The only apparatus needed is small vials of alcohol and tweezers. It should be borne in mind that all species should be collected in *large* series, and everything must be carefully labeled.

A NEW CONOCEPHALUS.

By LAWRENCE BRUNER.

Conocephalus atlanticus n. sp.

Grass green, very rarely flecked with dusky spots, moderately slender, with rather short wings and long ovipositor.

Fastigium of the vertex short, a trifle longer than broad, rounded in front and furnished below with a blunt tooth at base. It is bordered above at sides and in front by a yellowish line, below which it is more or less heavily marked in front by a transverse line of black. Pronotum usually with lateral carinae yellowish, the disk flattened, quite coarsely punctate and granulate; the lateral lobes with anterior and posterior angles rounded. Tegmina extending beyond the apex of the hind femora from one-fifth to one-third their length, their tips acuminate rounded. Femora of front and middle legs below with 0-3 spines, those of hind legs with spines

on both sides. Tibiæ of all more or less infuscated. Ovipositor rather long and slender, as long or longer than the body, a little curved near the base. Antennæ rufous, becoming infuscated apically.

Length of body, male, 24-27 mm., female, 26-28 mm.; of fastigium, male, 1.4 mm., female, 1.6 mm.; of pronotum, male, 7.2 mm., female, 6.7-7 mm.; of tegmina, male, 33 mm., female, 28-36 mm.; of hind femora, male, 19 mm., female, 19-21 mm.; of ovipositor, 29.5-31 mm.

HABITAT.—New Jersey, Philadelphia neck, Pa. (J. B. Smith); Maryland, Virginia (Bruner); Virginia (Pergande).

This insect approaches the *C. gladiator* Redtenbacher in the length of its ovipositor and wings, but differs from it in other respects. It is too small for *C. dissimilis* Serv. and has too short hind legs to be placed with *C. retusus* Scudder, while *C. obtusus* Burmeister seems to be an insect with a much shorter ovipositor. Described from 14 specimens.

PHYSIOLOGICAL SPECIES AGAIN.

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In an editorial in THE NEWS for November, 1897, the editor tells of a strange tune sung (?) by a Cicada along the Jersey shore, and raises the query: "Is there such a thing as physiological species?" In the December number Prof. Cockerell expresses his belief in such species and advises naturalists to be on the watch for them, while in the succeeding issue Mr. Robertson asks why the term physiological species is used and requests examples.

Let us broaden the question to include all animal and plant life, and ask: "Do systematists ever constitute species on physiological characters alone?" Unquestionably they do and numerous instances can readily be given. Prof. Farlow, than whom we can have no better authority, says in his recent article on "The Conception of Species": "We cannot fail to notice the increasing tendency among cryptogamic botanists to give more and more weight to physiological characters in limiting their species." "One who takes up the recent descriptive works on Uredinaceæ is surprised to see the number of species which depend on physiological characters." "The tendency to split up species on physiological grounds becomes more and more marked." "The explanation is to be sought in the fact that descriptive botany in certain groups of plants